

## **DETAILED ACTION**

### ***Status of Application***

1. Examiner acknowledges receipt and entry of Applicants' Request for Continued Examination and Preliminary Amendment filed on May 9, 2011.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-7, 11-14, 17-20 and 23-26 rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,527,817 to Fang et al. (hereinafter "Fang") in view of United States Pre-Grant Patent Application Publication No. 2003/0198759 to Fruge et al. (hereinafter "Fruge").

Referring to Applicants' independent claims 1, 11, 17, 25 and 26, Fang et al. teaches a polishing composition and polishing method, said composition comprises 10-95 weight percent, based on the solids of abrasive particles (colloidal silica), wherein the abrasive particles have a polydispersed particle size distribution and water (abstract and column 2, line 62 - column 4, line 2). The standard deviation of the particles is also defined.

However, though the reference discloses the general conditions of the instant invention, it does not specifically disclose a span value by volume of the colloidal silica particles.

Fruge is drawn to a coating composition comprising colloidal silica (title). Specifically, Fruge discloses employing polydispersed colloidal silica with a preferred median particle size being in the range of 20 to 30 nm (instant claimed range is about 20 to about 100), with a span value, or 80% span value ( $d_{90}-d_{10}$ ), preferably being 40 nm (instant claimed range is greater than or equal to 15 nm) (par. [0033]). Thus, as the entire range is within 100 nm, the fraction of particles greater than about 100 nm is 0%.

At the time of invention it would have been obvious to a person of ordinary skill in the art to produce the product/process of Fang including the claimed span value for the colloidal silica particles, in view of the teaching of Fruge. The suggestion or motivation for doing so would have been to provide an acceptable span value of the polydispersed colloidal silica particles required by the primary references of Fang but not disclosed.

Referring now to Applicants' claims 2-4, 12, and 18, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 15 nm. Furthermore, as the entire range is within 100 nm, the fraction of particles greater than about 100 nm is 0%.

Referring now to Applicants' claims 5, 13, and 19, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 18 nm. Furthermore, as the entire range is within 100 nm, the fraction of particles greater than about 100 nm is 0%.

Referring now to Applicants' claims 6, 14, and 20, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 20 nm. Furthermore, as the entire range is within 100 nm, the fraction of particles greater than about 100 nm is 0%.

Referring now to Applicants' claim 7, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 22 nm. Furthermore, as the entire range is within 100 nm, the fraction of particles greater than about 100 nm is 0%.

Referring now to Applicants' claim 23, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 25 nm.

Referring now to Applicants' claim 24, Fruge discloses a span value of 40 nm (par. [0033]), which is greater than 30 nm.

### ***Response to Arguments***

6. Applicants' amendment to claims 1, 11, 17, 25 and 26 in the Request for Continued Examination and Preliminary Amendment filed May 9, 2011, with respect to the claim objection have been fully considered and are persuasive. The objection to the claims has been withdrawn.

7. Applicant's arguments in the Request for Continued Examination and Preliminary Amendment filed May 9, 2011, with respect to the rejection of claims 1-7, 11-14, 17-20 and 23-26 under 35 USC 103(a) have been fully considered but they are not persuasive.

8. In response to applicant's argument that Fruge is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

9. The nature of the problem being solved by Fruge or type of art involved is irrelevant. Fruge is relied upon to teach the disclosure of an inherent characteristic of

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colloidal silica not explicitly taught by Fang. While teaching how to prepare CMP slurries using colloidal silica, Fang discloses certain properties of colloidal silica but not the span value. However, the span value of colloidal silica is an inherent property. And, Fruge discloses the span value of colloidal silica. Hence, when reading the combined teaching of Fang in view of Fruge, a person having ordinary skill in the art recognizes the colloidal silica utilized by Fang has the inherent characteristic of the span value taught by Fruge.

### ***Conclusion***

10. This is the continued examination of applicant's earlier Application No. 10/564,842. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROSS J. CHRISTIE whose telephone number is (571)270-3478. The examiner can normally be reached on Monday-Friday 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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